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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,323	07/13/2006	Ian George Griffiths	GB920030030US1	4569

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EXAMINER	
BROPHY, MATTHEW J	

ART UNIT	PAPER NUMBER
2191	

NOTIFICATION DATE	DELIVERY MODE
08/22/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptonotifs@yeeiplaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/554,323	GRIFFITHS ET AL.	
	Examiner	Art Unit	
	MATTHEW J. BROPHY	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed May 20, 2008.

2. Claims 1-6 and 14 are pending.

Response to Amendment

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2, 5, 6, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,966,702 Fresko et al hereinafter Fresko.

Regarding Claims 1, Fresko teaches: (Currently amended) A data processing method for creating an executable file by combining a plurality of run units, the method comprising ~~the steps of: reading a first run unit to be added to the executable file; locating a first data entity set to a first string value in the first run unit;~~ responsive to a determination that a first run unit to be added to the executable file comprises a first data entity set to a first value ndicating that the first data entity is required to appear only once in the executable file **(Column 9, Lines 17-21, "In step 402, the pre-processor examines the constant pool tables of each class to determine the set of class file constants (such as strings and numerics, as well as others specific to the class file format) that can be shared between classes in "S."" i.e. determines which entities are "constants"),** determining whether the first data entity matches [[with]] a second data entity set to a second value and included in a second run unit, the second data entity being from a wherein the second run unit comprises a run unit that was previously added to the executable file **(Column 9, Lines 21-23, "A shared constant**

pool table is created in step 403, with all duplicate constants determined from step 402."); [[and]] responsive to a determination that the first data entity matches the second data entity, adding the first run unit to the executable file [[but]] without the first data entity **(Column 9, Lines 23-35, "In step 404, the pre-processor removes the duplicate, shared constants from the individual constant pool tables of each class.")**. ; and responsive to a determination that the first data entity does not match the second data entity, adding the first run unit to the executable file with the first data entity **(Column 9, Lines 23-35, "In step 404, the pre-processor removes the duplicate, shared constants from the individual constant pool tables of each class." i.e. if they are NOT duplicates, they are NOT removed from the constant pool of the class when the class file is added)**.

Regarding Claims 2, Fresko teaches: (Currently amended) A method of claim 1 wherein the ~~step of matching matches~~ the first data entity [[with]] matches the second data entity if the first value and second value are identical. **(Column 9, Lines 21-23, "A shared constant pool table is created in step 403, with all duplicate constants determined from step 402.").**

Regarding Claims 5, Fresko teaches:(Currently amended) A method of claim 1 wherein the determination that the first run unit to be added to the executable file comprises a first data entity set to a first value indicating that the first data entity is required to appear only once in the executable file **(Column 9, Lines 17-21, "In step 402, the pre-processor examines the constant pool tables of each class to determine the set of class file constants (such as strings and numerics, as well as**

others specific to the class file format) that can be shared between classes in "S."" i.e. determines which entities are "constants"), the step of locating a first data entity comprises ~~the steps of:~~ locating ~~two or more~~ a plurality of data entities in the first run unit **(Column 9, Lines 21-23, "A shared constant pool table is created in step 403, with all duplicate constants determined from step 402.")**; and creating the first data entity from the two ~~or more date~~ plurality of data entities **(Column 9, Lines 21-23, "A shared constant pool table is created in step 403, with all duplicate constants determined from step 402.").**

Regarding Claim 6, Fresko teaches: (Currently amended) A method of claim 1 wherein the ~~step of locating a first data entity locates the first data entity using a key value by which~~ the first ~~data entity is marked~~ value is a key value **(Column 9, Lines 55-57, "In one embodiment of the invention, a new constant type is defined with a corresponding constant type tag. The new constant type provides as its info[ ] element an index into the shared constant table.")**.

Regarding Claim 14, Fresko teaches: (Currently amended) A method of claim 5 wherein the ~~step of~~ locating ~~two or more~~ a plurality ofdata entities comprises locating a plurality of data entities using a key value by which each of the ~~two or more~~ plurality of data entities is marked. **(Col. 9 Ln 55-57, "In one embodiment of the invention, a new constant type is defined with a corresponding constant type tag. The new constant type provides as its info[ ] element an index into the shared constant table.")**

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,966,702 Fresko et al hereinafter Fresko in view of US PG Pub 2005/0114840 Ziedman hereinafter Ziedman.

Regarding Claim 3, Fresko teaches the limitations of Claim 1. Fresko does not teach: A method of claim 1 wherein the ~~step of matching matches~~ the first data entity [[with]] matches the second data entity if the second value partially matches contains the first value. However, this limitation is taught by Ziedman **(e.g. "Partial Word Matching [0077] The "partial word matching" algorithm examines each identifier (non-keyword) word in the source code of one file of a file pair and finds all words that match a sequence within one or more non-keyword words in the other file of a file pair. Like the word matching algorithm, this one is also case insensitive. This algorithm is illustrated in FIG. 7. In part (a) 701, the non-keyword words from the two files are displayed. In part (b) 702, every word from one file that can be found as a sequence within a word from the other file is listed. So the identifier "abc" in file 1 can be found within identifiers "aabc", "abc1111111", and "abcxxxyz" in file 2. Note that identifier "pdq" is not listed in the array of partially matching words because it matches completely and was already considered in**

the word matching algorithm. Also note that identifier "x" is not listed in the array because 1-character words are ignored.") In addition it would have been obvious to one of ordinary skill in the art to combine the teachings of Fresko with the partial matching of Ziedman as the use of partial matching in Fresko's invention would further increase the memory space saved by Fresko's invention.

Regarding Claim 4, Fresko further teaches: A method of claim 3 further comprising ~~the steps: reading a third run unit to be added to the executable file, wherein the third run unit contains a~~

~~third data entity of a third string value;~~ determining whether matching the first data entity matches a ~~with the~~ third data entity included in a third run unit to be added to the executable file, wherein the third data entity is set to a third value indicating that the third data entity is required to appear only once in the executable file, **(Column 9, Lines 17-21, "In step 402, the pre-processor examines the constant pool tables of each class to determine the set of class file constants (such as strings and numerics, as well as others specific to the class file format) that can be shared between classes in "S."" i.e. determines which entities are "constants"),** and wherein the first data entity matches the third data entity a match is found if the third value contains the first value **(Column 9, Lines 21-23, "A shared constant pool table is created in step 403, with all duplicate constants determined from step 402.")**; responsive to a determination that the first data entity matches the third data entity, removing the first data entity from the executable file **(Column 9, Lines 23-35, "In step 404, the pre-processor removes the duplicate, shared constants from the individual constant**

pool tables of each class."); and adding the third data entity to the executable file **(Column 9, Lines 23-35, "In step 404, the pre-processor removes the duplicate, shared constants from the individual constant pool tables of each class.")**.

.Response to Arguments

In remarks, Applicant Argues:

Fresko does not, however, disclose or suggest "responsive to a determination that a first run unit to be added to the executable file comprises a first data entity set to a first value indicating that the first data entity is required to appear only once in the executable file, determining whether the first data entity matches a second data entity set to a second value and included in a second run unit, wherein the second run unit comprises a run unit that was previously added to the executable file" as recited in amended claim 1. Fresco does not compare a data entity included in a run unit to be added to an executable file with a data entity included in a run unit that was previously added to the executable file. and does not make a determination whether a first data entity included in a first run unit to be added to an executable file matches a second data entity included in a second run unit that was previously added to the executable file.

Yet further, because Fresko does not disclose or suggest "determining whether the first data entity matches a second data entity set to a second value and included in a second run unit, wherein the second run unit comprises a run unit that was previously added to the executable file" as recited in claim 1, the reference also does not disclose or suggest making such a determination "responsive to a determination that a first run

unit to be added to the executable file comprises a first data entity set to a first value indicating that the first data entity is required to appear only once in the executable file" as is additionally recited in claim 1.

Fresko, accordingly, does not disclose or suggest "responsive to a determination that a first run unit to be added to the executable file comprises a first data entity set to a first value indicating that the first data entity is required to appear only once in the executable file, determining whether the first data entity matches a second data entity set to a second value and included in a second run unit, wherein the second run unit comprises a run unit that was previously added to the executable file" as recited in amended claim 1, and does not anticipate claim 1 for this reason.

Fresko also does not disclose or suggest "responsive to a determination that the first data entity matches the second data entity, adding the first run unit to the executable file without the first data entity", and "responsive to a determination that the first data entity does not match the second data entity, adding the first run unit to the executable file with the first data entity" as now recited in claim 1. Instead, as described in the above-reproduced portion of Fresko, a shared constant pool table is created with all duplicate constants, and the duplicate, shared constants are removed from individual constant pool tables of each class. Fresko does not disclose or suggest adding a run unit to an executable file without or with a data entity depending on whether the data entity matches a data entity that was included in a run unit previously added to the executable file.

Fresko, accordingly, also does not disclose or suggest "responsive to a determination that the first data entity matches the second data entity, adding the first run unit to the executable file without the first data entity", and "responsive to a determination that the first data entity does not match the second data entity, adding the first run unit to the executable file with the first data entity", and does not anticipate claim lfor this reason as well.

Examiner's Response:

Examiner respectfully disagrees. Fresko anticipates "responsive to a determination that a first run unit to be added to the executable file comprises a first data entity set to a first value indicating that the first data entity is required to appear only once in the executable file" as well as the rest of claim 1. I.e. Fresko determines that the data entity in the class file is "constant". Fresko's invention eliminates redundancies in memory by only saving duplicated constants once in the shared constant pool table of the multi-class ("execution") file. When a class file is added to the multi-class file, any duplicate constants are not included in the multi-class file. The comparison of constants is made in Step 402. Claim 1 is anticipated.

In Remarks, Applicant Argues:

For example, claim 3 recites that the first data entity matches the second data entity if the second value partially matches the first value. As noted by the Examiner, Fresko discloses only that "[a] shared constant pool table is created in step 403, with all

duplicate constants determined from step 402." Claim 3, accordingly, is not anticipated by Fresko in its own right as well as by virtue of its dependency.

Examiner's Response:

This argument is moot as this amendment has necessitated a new grounds of rejection.

In Remarks, Applicant Argues:

Fresko discloses only that when the pre-processor creates a shared constant pool table, duplicate shared constants are removed from individual constant pool tables. The reference does not disclose or suggest removing a first data entity from an executable file; and adding a third data entity to the executable file "responsive to a determination that the first data entity matches the third data entity" as recited in claim 4. Claim 4, accordingly, is also not anticipated by Fresko in its own right as well as by virtue of its dependency.

Examminer's Response:

Examiner respectfully disagrees. As described in the rejection above, Fresko removes the duplicate data entities (e.g. "first data entity") from the class files that are added to multi-class (i.e. executable) file. In addition, when adding classes to the file, there is an entry added to the shared constant table (e.g. "third data entity"). Claim 4 is obvious over Fresko in view of Ziedman.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. BROPHY whose telephone number is 571-270-1642. The examiner can normally be reached on Monday-Thursday 8:00AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJB

8/18/2008

/Wei Zhen/
Supervisory Patent Examiner, Art Unit 2191